I CLAIM:

1. A method of fabricating an electronic circuit-controlled MEMS device comprising the steps of:

forming a multi layered MEMS structure, having a physically movable electromagnetic field-responsive active element, over a sacrificial layer of a sacrificial first substrate member;

said forming step also including constructing a hinge-attached physical shield member, an extendable physical shield latching element and a plurality of MEMS structure-attached and physical shield-attached tether elements in said multiple layers in locations adjacent said multi layered MEMS structure;

releasing said physical shield member and said MEMS structure from said sacrificial substrate by removing said sacrificial layer;

moving said hinged physical shield element into a latch-stabilized ambient-protecting relationship with said released MEMS structure;

guiding said protected MEMS structure with assistance from said physical shield element and said tether elements into an aligned mating relationship with an open face of a second substrate member-carried electronic control circuit; and

joining said MEMS structure and said open faced electronic control circuit into an integral, closed-surface, MEMS device.

2. The method of fabricating an electronic circuit-controlled MEMS device of claim 1 wherein said step of guiding said protected MEMS structure with assistance from said physical shield element and said tether elements into an aligned mating relationship with an open face of a second substrate member-carried electronic control circuit includes guiding said MEMS device into an aligned relationship with an electrostatic field-responsive optical mirror element.

3. The method of fabricating an electronic circuit-controlled MEMS device of claim 1 wherein said forming step includes constructing a plurality of substrate edge-attached, first substrate layer comprised, hinge staple elements surrounding a second substrate layer-comprised hinge pin element.

4. The method of fabricating an electronic circuit-controlled MEMS device of claim 1 wherein said forming step further includes fabricating a plurality of lifting beam elements engageable with said hinge-attached physical shield member during an initial lifting of said physical shield member in said releasing step.

5. The method of fabricating an electronic circuit-controlled MEMS device of claim 1 wherein said step of releasing said physical shield member and said MEMS structure from said sacrificial substrate by removing said sacrificial layer includes etching an oxide layer.

6. The method of fabricating an electronic circuit-controlled MEMS device of claim 1 wherein said step of releasing said physical shield member and said MEMS structure also includes releasing a physical shield member stabilizing latch element.

7. The method of fabricating an electronic circuit-controlled MEMS device of claim 1 wherein said step of moving said hinged physical shield element into a latch-stabilized ambient-protecting relationship with said released MEMS structure includes also moving a sliding latch element held captured by a substrate-connected rail array.

8. The method of fabricating an electronic circuit-controlled MEMS device of claim 7 wherein said step of moving a sliding latch element held captured by a substrate-connected rail array includes applying external forces to said sliding latch through a wafer probe tip.

9. The method of fabricating an electronic circuit-controlled MEMS device of claim 1 wherein said step of moving said hinged physical shield element into a latch-stabilized ambient-protecting relationship with said released MEMS structure includes rotating said hinged physical shield element about said hinge to a position of one hundred eighty degrees displacement with respect to a surface portion of said sacrificial first substrate.

10. The method of fabricating an electronic circuit-controlled MEMS device of claim 1 wherein said step of joining said MEMS structure and said open faced electronic control circuit into an integral, closed-surface, MEMS device includes severing said tether elements.

11. The method of fabricating an electronic circuit-controlled MEMS device of claim 1 wherein said step of joining said MEMS structure and said open faced electronic control circuit into an integral, closed-surface, MEMS device includes sealing a closed surface package with one of an epoxy resin and a metallic solder.

12. The method of making a MEMS device comprising the steps of:

fabricating an array of MEMS modules and an array of MEMS controller modules on first and second fabrication substrate members;

a selected one of said array of modules having a sacrificial fabrication substrate member and including a plurality of connecting elements coupling said array of modules with a physically-stiffening header member;

each module of said MEMS array including an electromagnetic field-addressable physically movable active member;

each module of said MEMS controller array including an electromagnetic field-generating output member;

releasing said selected one of said array of modules from said sacrificial fabrication substrate member into a physically-stiffening header member-supported free state;

rotating said released selected one of said array of modules into an off substrate attached position of cantilever supporting by said connecting elements from said physically-stiffening header member; and

aligning and bonding said released rotated array of modules with corresponding unreleased modules of said array of MEMS modules and array of MEMS controller modules to form an array of MEMS devices each having an electromagnetic field-addressable physically movable active member proximate an electromagnetic field-generating output member.

13. A partially completed electronic circuit controllable MEMS device comprising the combination of:

an edge hinges-inclusive multi layer covered sacrificial first substrate member;

a MEMS module protective shield member pivotally received on said sacrificial first substrate edge hinges;

a MEMS module suspended from said MEMS module protective shield member by a plurality of severable tether members;

a MEMS module protective shield member latch assembly supporting said MEMS module protective shield member and said MEMS module in a selected substrate-removed location; and

a second substrate member-received MEMS controller electronic circuit die located in said selected substrate-removed location within severable tether members distance of a said latch assembly-stabilized MEMS module protective shield member in an orientation of subsequently-electable aligned physical unification engagement with said MEMS module;

said MEMS module protective shield member enabling safe manipulative positioning and safe liquid bath-engagement of said MEMS module during removed substrate, tethered, handling, positioning and processing of said module.

14. The partially completed electronic circuit controllable MEMS device of claim 13 wherein said MEMS controller electronic circuit die comprises a CMOS electronic circuit.

15. The partially completed electronic circuit controllable MEMS device of claim 13 wherein said multi layer covered sacrificial first substrate member includes first and second polysilicon layers covering said substrate.

16. The partially completed electronic circuit controllable MEMS device of claim 15 wherein said MEMS module protective shield member, said MEMS module protective shield member latch assembly and said severable tether members are comprised of polysilicon material from said polysilicon layers.

17. The partially completed electronic circuit controllable MEMS device of claim 15 further including a plurality of protective shield member lifting beam members also comprised of polysilicon material from said polysilicon layers.

18. The partially completed electronic circuit controllable MEMS device of claim 13 wherein said MEMS module protective shield member latch assembly includes a sliding latch member held captive by a plurality of first substrate-attached rail members comprised of polysilicon material from said polysilicon layers.

19. The partially completed electronic circuit controllable MEMS device of claim 13 wherein said sacrificial first substrate member and said second substrate member are comprised of different semiconductor materials.

20. The partially completed electronic circuit controllable MEMS device of claim 13 wherein said selected substrate-removed location of said MEMS module protective shield

member latch assembly, said MEMS module protective shield member and said MEMS module is a position of one hundred eighty degrees rotation with respect to a planar surface of said sacrificial first substrate member.

21. A reduced substrate interference method of making a flip chip MEMS electrical circuit device, said method comprising the steps of:

fabricating a micromechanical portion of said MEMS circuit device in upper level layers of a multi layer coating over a sacrificial first MEMS substrate element;

forming a hinge inclusive physical shield element and a physical shield element latch element in said same upper levels of a multi layer coating over a sacrificial first MEMS substrate element;

said fabricating and forming steps being accomplished during a first upright physical disposition of said sacrificial substrate member;

releasing said fabricated micromechanical portion of said MEMS circuit device from said first sacrificial substrate member with an etching sequence;[dependent claim: oxide layer too]

freeing said formed hinge inclusive physical shield element and said physical shield element latch element from said first sacrificial substrate member with an etching sequence;

moving said hinge inclusive physical shield element and said physical shield element latch element, using externally-applied movement forces, into positions of latch-fixed adjacent supporting of said released micromechanical portion of said MEMS circuit device in a selected inverted off chip position; and

merging said micromechanical portion of said MEMS circuit device, from a now substrate free, physical shield element supported and inverted condition thereof, with an electronic circuit portion of said MEMS circuit device.